ABSTRACT OF THE DISCLOSURE

A knocking detecting device executes A/D conversion of a knock sensor signal every constant time ts and executes filter processing of the converted digital signal. The knocking detecting device determines whether the knocking arises or not according to the filter processed data. The device measures a TDC signal falling period T every 120° CA. The period indicating of 5° CA is divided by a constant period ts to obtain a value which is rounded off to derive an integer *N*. At a timing in which the crankshaft rotates to 10 ° CA from the TDC signal falling, the filter processed data which are derived every A/D timing ts are integrated every *N* pieces of data. When the number of integrated value reaches 12, knocking determining process is executed based on the 12 integrated values.